

Low vitamin D, smoking predict worse cognitive function in MS

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(HealthDay)—For multiple sclerosis (MS) patients with clinically

isolated syndrome, lower vitamin D and smoking predict worse long-term cognitive function and neuronal integrity, according to a study published online April 16 in *Neurology*.

Marianna Cortese, M.D., Ph.D., from the University of Bergen in Norway, and colleagues conducted a study involving 278 patients with clinically isolated syndrome who participated in a clinical trial and completed an 11-year follow-up assessment. At baseline and six, 12, and 24 months, serum 25-hydroxyvitamin-D (25[OH]D), cotinine, and anti-Epstein-Barr virus nuclear antigen 1 (EBNA-1) immunoglobulin G (IgG) were assessed; the correlations between these biomarkers and Paced Auditory Serial Addition Test (PASAT)-3 scores and serum neurofilament light chain (NfL) concentrations were assessed at 11 years.

The researchers found that higher vitamin D predicted better cognitive performance while smoking predicted worse performance. A 50-nmol/L higher mean 25(OH)D in the first two years correlated with reduced odds of poorer PASAT performance at year 11 (multivariable odds ratio, 0.35). Smokers and [heavy smokers](#) had lower standardized PASAT scores compared with nonsmokers ($P_{\text{trend}} = 0.026$). There was no correlation between baseline anti-EBNA-1 IgG levels and cognitive performance ($P_{\text{trend}} = 0.88$). These findings were corroborated in associations with NfL concentrations at year 11.

"These results suggest that correcting vitamin D insufficiency and abstaining from cigarette smoking after clinical MS onset might protect long-term cognitive function and CNS (central nervous system) integrity," the authors write.

Two authors disclosed ties to Bayer.

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